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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,103	12/15/2000	Sheng-Hsin Hu	16,029	9923

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EXAMINER

THOMPSON, CAMIE S

ART UNIT	PAPER NUMBER
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1774

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DATE MAILED: 11/20/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	09/738,103	HU ET AL.	
	Examiner	Art Unit	
	Camie S Thompson	1774	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☒ This action is FINAL.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-60 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-60 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All   b) ☐ Some \*   c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                      | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____.  |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                             | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2 and 6</u> | 6) <input type="checkbox"/> Other:  |

**DETAILED ACTION**

1. Applicant's amendment and accompanying remarks filed on August 27, 2002 is acknowledged.
2. Examiner acknowledges cancelled claims 61-79.
3. The objection to the abstract of disclosure is withdrawn due to applicant's amended abstract.
4. The objection to claim 1 is withdrawn due to applicant's amended claim 1.
5. The rejection of claims 13, 24, 25 and 28 under 35 U.S.C. 112, second paragraph is withdrawn due to applicant's amended claims 13, 24, 25 and 28.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 27-39, 41-43, 47-51, 55-60 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohama, U.S. Patent No. 5,703,152.

Ohama discloses a liquid absorbing paper-like body such as activated carbon impregnated with a deodorizing composition that can capture bad odor substances such as ammonia and amines as per instant claims 43 and 51 (see column 1, lines 24-41). The reference discloses a deodorizing composition that includes aqueous slurry that can be impregnated in a fibrous material, a masking agent, blowing agent that makes the coating material porous and a pigment as per

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instant claims 27, 37-39 and 41-42, 47, 50 and 55 (see column 4, lines 12-66). Ohama discloses using water insoluble resins that are hydrophobic such as synthetic rubbers, silicon resins and fluoroethylene resins as deformable binding material making the coating material elastomeric as per instant claims 28-30, 35, 49 and 60 (see column 4, lines 46-54). In addition, Ohama discloses using kaolin as an extender to provide opacity and pigments such as titanium dioxide and colored inorganic pigments so as to provide coloring to the coating material as per instant claims 36-38, 48 and 58 (see column 4, lines 55-65).

It is also noted that Ohama discloses that the coating composition was applied to a surface of round filter that contained activated carbon having a diameter of 2 mm as per instant claims 56-57 (see column 9, lines 8-10)

The coated activated carbon has a relative adsorption efficiency of at least 30% with respect to ammonia, a Shore A hardness value of less than 70, a Hunter Lab L value of at least 40 and an absolute "a" value or absolute "b" value greater than 10, as these are the physical properties of the coated activated carbon material as per instant claims 27, 31-34, 50, 55 and 59. Therefore, these features are inherent.

***Claim Rejections - 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. Claim 1-6 and 8-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Ohama, U.S. Patent No. 5,703,152.

Ohama discloses a deodorizing composition that can capture bad odor substances such as ammonia and amines when sprayed onto a fibrous material such as activated carbon as per instant claims 1, 5-6 and 22 (see abstract and column 1, lines 24-41). The reference discloses using a deformable, hydrophobic binding agent such as synthetic rubber, silicon resins and fluoroethylene resins; a masking agent and a blowing agent as per instant claims 1, 8 and 19-23 (see column 4, lines 12-64). The reference discloses using colored inorganic pigment to color the coating material and kaolin or talc to create an opaque coating material as per instant claims 11 and 13 (see column 4, line 55-61).

The coated activated carbon has a relative adsorption efficiency of at least 30% with respect to ammonia, a Shore A hardness value of less than 70, a Hunter Lab L value of at least 40 and an absolute "a" value or absolute "b" value greater than 10, as these are the physical properties of the coated activated carbon material as per instant claims 1-4, 9-10 and 12. Therefore, these features are inherent.

As a mechanical property, the coated activated carbon has a Particulate Noise Level of about 52 or less and is at least 6 decibels lower than the uncoated activated carbon as per instant claims 14-18. Therefore, these features are inherent.

In the reference, Ohama discloses using metal oxides as per instant claim 26 (see column 3, lines 24-31).

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The reference discloses that the metal oxide is 5-80% by weight of the total composition making it more concentrated than the coating material as per instant claims 24-25 (see column 3, lines 31-45).

Ohama does not disclose the add-on level of the coating material as per instant claim 1. It would have been obvious to one of ordinary skill in the art to add at least 5% of the coating material to the activated carbon in order to obtain better adsorption of odors and lower particulate noise. Claims 22 and 26 are product-by-process claims. Even though the product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process. The coated activated carbon is not a different product from the prior art because of the process.

10. Claims 7, 44-45 and 52-53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama, U.S. Patent No. 5,703,152 in view of Mauro et al., U.S. Patent No. 5,480,636 and in further view of Hawley's Condensed Chemical Dictionary, 14<sup>th</sup> Edition.

Ohama discloses using an aqueous or resin composition impregnated onto activated carbon to capture bad odors with features relied upon above. Ohama does not disclose capturing dimethyldisulfide odors as per instant claim 7. Nor does the reference disclose the activated carbon particles used in an absorbent article such as a sanitary napkin or a diaper as per instant claims 44-45 and 52-53. Mauro teaches the use of an odor controlling composition impregnated onto activated carbon to remove malodorous gases such as dimethylsulfide that may be found on

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sanitary napkins or a paper diaper (see abstract and column 1, lines 16-39). It is known that methyl sulfide (dimethyldisulfide) is a gas odorant by *Hawley's Condensed Chemical Dictionary, 14<sup>th</sup> Edition, page 400*. It would have been obvious to use a sanitary napkin or paper diaper as they contain activated carbon, which is used to contain ammonia and amine odors due to the excretion of bodily fluids and material.

11. Claims 40, 46 and 54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohama, U.S. Patent No. 5,703,152 in view of Pyzel, U.S. Patent No. 3,731,678.

Ohama discloses using a deodorizing composition impregnated onto activated carbon to capture bad odors with features relied upon above. The reference does not disclose that the coated activated carbon is granular nor a facemask. Pyzel teaches a smoke inhalation protector worn on the face that contains activated carbon as an adsorbent material as per instant claims 46 and 54 (see column 1, lines 11-34). Pyzel also teaches that the activated carbon be in granular form as per instant claim 40 (see column 6, lines 22-30). It would have been obvious to use the granular form of activated carbon because discrete granules permit air to be drawn easily through the material and increases adsorbent capacity.

#### ***Response to Arguments***

12. Applicant's arguments filed August 27, 2002 have been fully considered but they are not persuasive. Applicant argues that Ohama reference does not teach that the masking agent masks the dark color of the activated carbon. The claims do not recite that the masking agent masks the dark color of the activated carbon. The claims only recite that the masking agent comprises a white powder, titanium dioxide or a colored pigment. The Ohama reference does include in the

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composition titanium dioxide and colored inorganic pigments as shown in column 4, lines 55-65. Applicant argues that Ohama reference does not teach activated carbon as being useful as a porous substance. The claims do not recite that activated carbon is useful as a porous substance. Claim 41 recites that the coating material is porous. The Ohama reference does use a blowing agent that makes the coating material porous. Applicant argues that Ohama reference teaches mixing and/or kneading the deodorizing slurry but does not teach binding a resin to activated carbon. The claims do not read on binding a resin to activated carbon. In addition, this is a process limitation and is given no patentable weight. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art was made by a different process. See MPEP 2113. Applicant argues that the resins found in the Ohama reference are not deformable or elastomeric binding agents. By nature, silicone resins, synthetic rubbers and fluoroethylene resins are deformable and elastomeric and are included in the composition even if they are not specifically stated as being used as binding agents. Applicant argues that deodorizing composition of Ohama is not a coating material. The composition in Ohama is used to coat the activated carbon. In addition, paint is a coating material. The Ohama reference teaches a composition that can capture bad odor substances when sprayed onto activated carbon and the odoriferous agent is ammonia or an amine will have Relative Adsorption Efficiency of at least 50% in order to capture the bad odor. Applicant argues that Pyzel does not teach coating activated carbon and that one of ordinary skill in the art would not find motivation to coat



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granules of activated carbon with a masking agent. Pyzel's face mask contains activated carbon in the granular form and is used as an adsorbent. Although Pyzel does not specifically teach that the activated carbon is coated with a masking agent, it would have been obvious to combine the Pyzel reference with the Ohama reference since Ohama discloses that a masking agent is used in a coating material that is impregnated onto the activated carbon in order to increase adsorbency. Also, applicant argues that one of ordinary skill would not find it obvious to coat activated carbon with either a binding agent, masking agent or elastomeric binding agent. It is known in the art through the Ohama reference that a coating material/deodorizing material comprising a binding agent, masking agent or elastomeric binding agent can be impregnated onto activated carbon in order to absorb bad odors. Both Ohama and Pyzel teach using activated carbon as an adsorbent and thus are analogous art. Having the activated carbon in granular form as found in the Pyzel reference is used to increase adsorbent capacity that is the purpose of the Ohama reference. Therefore, to combine Ohama and Pyzel is not without motivation.

**13. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communication from the examiner should be directed to Camie S. Thompson whose telephone number is (703) 305-4488. The examiner can normally be reached on Monday through Friday from 7:30 am to 4:00 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cynthia H. Kelly, can be reached at (703) 308-0449. The fax phone numbers for the Group are (703) 872-9310 {before finals} and (703) 872-9311 {after finals}.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0661.

CYNTHIA H. KELLY  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

A handwritten signature in black ink, appearing to read 'Cynthia H. Kelly', with a stylized flourish at the end.